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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/270,673	03/16/99	UEDA	T

IM22/0131

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EXAMINER	
MIGGINS, M	
ART UNIT	**PAPER NUMBER**
1772	5

DATE MAILED: 01/31/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.	Applicant(s)
09/270,673	Ueda et al.
Examiner	**Group Art Unit**
Mike Miggins	1772

☒ Responsive to communication(s) filed on 10/12/00

☐ This action is **FINAL.**

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claim

☒ Claim(s) 1-21 is/are pending in the applicat

Of the above, claim(s) 13-21 is/are withdrawn from consideration

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1-12 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☒ Claims 1-21 are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☒ All ☐ Some* ☒ None of the CERTIFIED copies of the priority documents have been

☒ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

— SEE OFFICE ACTION ON THE FOLLOWING PAGES —

DETAILED ACTION

Election/Restriction

1. Applicant's election with traverse of Group I in Paper No. 4 is acknowledged. The traversal is on the ground(s) that because there is nothing in the instant application to support using the claimed method to make a pipe, restriction is not proper. This is not found persuasive because the examiner does not have to rely on applicant's specification to find another product made by the same method, rather, examiner is merely required to supply a distinct product from knowledge generally available to one of ordinary skill in the art.

The requirement is still deemed proper and is therefore made FINAL.

2. This application contains claims 13-21 drawn to an invention nonelected with traverse in Paper No. 5. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MEP. § 821.01.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2224, 76-87 33

4. Claims 1-3, 5-6 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Braus et al. (U.S. Patent No. 4,847,135) in view of Hartel et al. (U.S. Patent No. 4,942,075).

Braus et al. teach a sliding fluoroplastics member having a composite structure which mainly consists of fluorine plastics (PTFE) and short fibers (nylon) wherein said annular sliding fluoroplastics member having said composite structure mainly consists of said fluorine plastics and said short fibers is impregnated with a lubricant (abstract, column 3, lines 27-68, column 4, lines 1-68, column 6, lines 1-68) (applies to instant claims 1, 6 and 12).

The difference between the instant claims and Braus et al. is that Braus et al. do not teach the annular member wherein 20 or 50 or more weight percent of short fibers by weight of a total amount of said short fibers are oriented in a direction along which a burden of a load is large or oriented in an axial direction or in a circumferential direction.

Hartel et al. teach the annular member wherein 20 or 50 or more weight percent of short fibers by weight of a total amount of said short fibers are oriented in a direction along which a burden of a load is large or oriented in an axial direction or in a circumferential direction (column 3, lines 1-68, column 4, lines 1-68 and Figs. 1-2) (applies to instant claims 1-3 and 5).

One of ordinary skill in the art would have been motivated to combine the teachings of Braus et al. and Hartel et al. because both references teach composite annular members and the annular member of Hartel et al. has increase load strength.

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the annular member of Braus et al. by fabricating an annular

member wherein 20 or 50 or more weight percent of short fibers by weight of a total amount of said short fibers are oriented in a direction along which a burden of a load is large or oriented in an axial direction or in a circumferential direction according to the teachings of Hartel et al. because by fabricating such a member, an annular member with improved load strength is obtained.

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5. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Braus et al. (U.S. Patent No. 4,847,135) in view of Hartel et al. (U.S. Patent No. 4,942,075), as applied to claims 1-3, 5-6 and 12 above, and further in view of Stiff et al. (U.S. Patent No. 3,675,980).

The difference between the instant claim and Braus et al. not yet discussed is that Braus et al. do not teach an annular member wherein the short fibers are oriented in a spiral direction.

Stiff et al. teach an annular member wherein the short fibers are oriented in a spiral direction (column 5, lines 1-65).

One of ordinary skill in the art would have been motivated to combine the teachings of Braus et al. and Stiff et al. because both references disclose composite annular members and the member of Stiff et al. has improved load strength.

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the annular member of Braus et al. by fabricating an annular member wherein the short fibers are oriented in a spiral direction according to the teachings of Stiff et al. because by fabricating such a member, an annular member with improved load strength is obtained.

08-29

6. Claims 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Braus et al. (U.S. Patent No. 4,847,135) in view of Hartel et al. (U.S. Patent No. 4,942,075), as applied to claims 1-3, 5-6 and 12 above, and further in view of Runton et al. (U.S. Patent No. 3,000,076).

The difference between the instant claims and Braus et al. not yet discussed is that Braus et al. do not teach an annular member wherein said composite structure is a structure in which a number of fluoride plastics layers containing short fibers are stacked in a radial direction, and each of said stacked layers has a wavy sectional shape which undulates in an axial direction, wherein overlapping faces of said layers are integrally coupled to one another.

Runton et al. teach an annular member wherein said composite structure is a structure in which a number of fluoride plastics layers containing short fibers are stacked in a radial direction, and each of said stacked layers has a wavy sectional shape which undulates in an axial direction, wherein overlapping faces of said layers are integrally coupled to one another (column 2, lines 1-71 and Figs. 1-6) (applies to instant claims 7-8).

One of ordinary skill in the art would have been motivated to combine the teachings of Braus et al. and Runton et al. because both references disclose composite annular members and the annular member of Runton et al. has improved load strength.

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the composite annular member of Braus et al. by fabricating an annular member wherein said composite structure is a structure in which a number of fluoride plastics layers containing short fibers are stacked in a radial direction, and each of said stacked

layers has a wavy sectional shape which undulates in an axial direction, wherein overlapping faces of said layers are integrally coupled to one another according to the teachings of Runton et al. because by fabricating such a member, an annular member with improved load strength is obtained. 30-31

7. Claims 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Braus et al. (U.S. Patent No. 4,847,135) in view of Hartel et al. (U.S. Patent No. 4,942,075), as applied to claims 1-3, 5-6 and 12 above, and further in view of Board, Jr. (U.S. Patent No. 3,950,599).

The difference between the instant claims and Braus et al. not yet discussed is that Braus et al. do not teach an annular member wherein plural filaments (aramid) are stitched to said composite structure.

Board, Jr. teaches an annular member wherein plural filaments (aramid) are stitched to said composite structure (column 6, lines 33-68 and Figs. 1-3) (applies to instant claims 9-10).

One of ordinary skill in the art would have been motivated to combine the teachings of Braun et al. and Board, Jr. because both references disclose composite annular members and the annular member of Board, Jr. has improved load strength.

Therefore it would have been obvious to one of ordinary skill at the time the invention was made to modify the annular member of Braus et al. by fabricating an annular member wherein plural filaments (aramid) are stitched to said composite structure according to the teachings of Board, Jr. because by fabricating such a member, an annular member with improved load strength is obtained.

8. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Braus et al. (U.S. Patent No. 4,847,135) in view of Hartel et al. (U.S. Patent No. 4,942,075) and Board, Jr. (U.S. Patent No. 3,950,599), as applied to claims 9-10 above, and further in view of Sumiyoshi et al. (U.S. Patent No. 4,559,248).

The difference between the instant claim and Braus et al. not yet discussed is that Braus et al. do not teach an annular member wherein at least one surface of said annular sliding fluoroplastics member is covered with an expanded graphite sheet.

Sumiyoshi et al. teach an annular member wherein at least one surface of said annular sliding fluoroplastics member is covered with an expanded graphite sheet (column 3, lines 1-68, column 7, lines 1-68 and Figs. 1-4).

One of ordinary skill in the art would have been motivated to combine the teachings of Braus et al. and Sumiyoshi et al. because both references disclose annular members and the annular member of Sumiyoshi et al. has improved heat resistance.

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the annular member of Braus et al. by fabricating an annular member wherein at least one surface of said annular sliding fluoroplastics member is covered with an expanded graphite sheet according to the teachings of Sumiyoshi et al. because by fabricating such a member, an annular member with improved heat resistance is obtained.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mike Miggins whose telephone number is (703) 305-0915. The examiner can normally be reached on Monday through Friday from 9:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's interim supervisor, Rena Dye, can be reached at (703) 308-4331. FAX communications should be sent to the appropriate FAX number; (703) 305-3599 for After Final Responses only or (703) 305-7718 for all other responses. FAXs received after 4 P.M. will not be processed until the following business day.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

MCM 1/27/01

RENA L. DYE
PRIMARY EXAMINER
Tech Center 1700